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EXAMINER
WASHINGTON, JAMARES

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-13_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-13_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 September 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers

have been placed of record in the file.

Specification

2.   The disclosure is objected to because of the following informalities:

"Generally, scanners can be cauterized into four types..." should read "Generally,

scanners can be characterized into four types..." (At paragraph [4])

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in
a printed publication in this or a foreign country, before the invention thereof by the
applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign
country or in public use or on sale in this country, more than one year prior to the date of
application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for
patent or (2) a patent granted on an application for patent by another filed in the United
States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for

purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1, 2, 7, 8, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Carl

J. Tesavis (US 20030086129 A1).

Regarding claim 1, Tesavis discloses an automatic document feeder (ADF) scanner

("Digital scanners use a number of transmissive or reflective electro-optical sensors to control

the movement of paper through the automatic document feeding (ADF) portion of a scanner" at

paragraph [2]) having a scanning module capable of positioning on a first scan position

accurately ("...the CCD of the scanners scan modules...also operate as sensors and are used to

locate and measure mechanical offsets from feeder to scan module and from home to scan area

of the glass platen..." at paragraph [8]), the automatic document feeder scanner comprising:

a housing (Fig. 2);

an automatic document feeder installed on the housing for conveying a first document

(Fig. 2 numeral 34 "ADF portion" at paragraph [20]);

a first predetermined pattern installed on a bottom surface of the automatic document

feeder (Fig. 3 numeral 27 "White Patch"), the first predetermined pattern having a first specific

relative position relation with the first scan position (Fig. 3 numerals 27 and 29 "White patch and

Lower camera" respectively). The first scan position happens to be the home position which is

relatively set by the "white patch" detection.

a scanning module installed in the housing for capturing image data of the first document

("According to the present invention a scanner controls the feeding and imaging of documents by

using a CCD camera as both scanner and sensor" at paragraph [6]);

and a processor installed in the housing for controlling the scanning module and the

ADF ("According to the present invention a scanner controls the feeding and imaging of

documents by using a CCD camera as both scanner and sensor..." at paragraph [6]. "This is

done by adding logic to the front-end hardware that receives data from the camera, and by

controlling that hardware in the scanner firmware..." at paragraph [7]), and for determining a

distance between the scanning module and the first scan position by analyzing the image data of

the first predetermined pattern captured by the scanning module ("...the CCD of the scanners

scan modules...operate as sensors and are used to locate and measure mechanical offsets from

feeder to scan module" at paragraph [8]. "Given that the document is moving at a constant

velocity and the UDDS 28 is a known distance 39 from the CCD aperture the PPC can begin a

timer to determine when the document will enter the CCD 26 and 29" at paragraph [22]. "At this

point the PPC will setup the secondary sensor 14 of the FEC 1 to detect the edge of the lower

white patch 27 and enable the SSE 95. The PPC 15 will then command the motor controller 19 to

slow step in the home direction 92 and will receive an interrupt from the FEC 93 when the white

patch label is detected" at paragraph [30]). The detection of the first predetermined pattern (the

white patches) allows the CCD to return to its home position where it is then used for scanning

documents from the ADF.

Regarding claim 2, Tesavis discloses the automatic document feeder scanner of claim 1, wherein the scanning module positioned on the first scan position is capable of capturing the whole first document conveyed over the automatic document feeder ("Once the document is in the ADF 34 it will be moved at a constant velocity through the upper and lower CCDs until it ends up in the output tray. The purpose of moving the paper through the CCDs 26 and 29 is to capture a digital version of the image on front and rear side of the document" at paragraph [21]). The first scan position would be the home position of the lower camera as depicted in Fig. 3.

Regarding claim 7, Tesavis discloses the automatic document feeder scanner of claim 1 further comprising a memory for storing a mapping table to map an image data of the first predetermined pattern to a length, the processor mapping an image data of the first predetermined pattern captured by the scanning module onto the mapping table and finding out a length corresponding to the captured image data, and determining the distance between the scanning module and the first scan position ("The platen type label has features which allows the scanner system to identify the type and size of the attached platen by capturing an image of it and analyzing characteristics of the image compared to known values as well as the location and size of the imaging area" at paragraph [29]).

Regarding claim 8, Tesavis discloses the automatic document feeder scanner of claim 1 further comprising a transparent document board for a second document to be placed on (Fig. 3 numeral 41 "Platen section"), and a second predetermined pattern installed on a bottom surface of the transparent document board (Fig. 3 numeral 30 "Platen Type Label"), the second

predetermined pattern having a second specific relative position relation with a second scan
position ("Initially the PPC will command the platen motor to move the lower camera from
home to a distance in steps equal to the length of the move 38 in the scan direction...When the
camera reaches the platen type label with the SSE setup, as previously described, an interrupt is
received by the PPC generated by the FEC 12 it will in turn generate valid page 86 and the
imaging hardware will begin capturing the image..." at paragraph [29]), on which the scanning
module can capture the whole second document ("The platen type label has features which
allows the scanner system to identify the type and size of the attached platen by capturing an
image of it and analyzing characteristics of the image compared to known values as well as the
location and size of the imaging area. The motor controller 19 CPU will eventually recognize a
point near the end of the move 87 and notify the PPC that it is about to decelerate via an interrupt
88" at paragraph [29]), and the processor further comprising a capability to determine a distance
between the scanning module and the second scan position by analyzing an image data of the
second predetermined pattern captured by the scanning module ("Initially the PPC will command
the platen motor to move the lower camera from home to a distance in steps equal to the length
of the move 38 in the scan direction at the velocity required for the specified resolution...When
the camera reaches the platen type label with the SSE setup, as previously described, an interrupt
is received by the PPC generated by the FEC 12" at paragraph [29]).

Regarding claim 13, Tesavis discloses an automatic document feeder scanner comprising:

a housing (Fig. 2);

an automatic document feeder installed on the housing for conveying a first document

(Fig. 2 numeral 34 "ADF portion" at paragraph [20]);

a scanning module installed in the housing for capturing image data of the document

(Fig. 2 numeral 25);

a position detector installed in the housing for detecting a relative position relation

between the automatic module document feeder and where the scanning module is located in the

housing ("...the CCD of the scanners scan modules, sometimes referred to as cameras, also

operate as sensors and are used to locate and measure mechanical offsets from feeder to scan

module" at paragraph [8]); and

a processor installed in the housing for controlling the movement of the scanning module

according to the relative position relation between the automatic document feeder and where the

scanning module is located in the housing ("Initially the PPC will command the platen motor to

move the lower camera from home to a distance in steps equal to the length of the move 38 in the

scan direction..." at paragraph [29]). Since the home position is the ADF scan position, the

module is moved according to a location compared to the ADF.

and for controlling the scanning module to capture the image data of the document

conveyed over the automatic document feeder ("...the FEC 1 must provide the functionality to

permit the power PPC 15 the ability to capture images for documents fed through the ADF

portion 34 of the scanner" at paragraph [20]) .

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 3-6 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carl

J. Tesavis (US 20030086129 A1) in combination with Jenn-Tsair Tsai et al (US 6381043 B1).

        Regarding claim 3, Tesavis discloses the automatic document feeder scanner of claim 1.

Tesavis also teaches a predetermined pattern (Fig. 3 numeral 27) which has a first side

perpendicular to a moving line along which the scanning module is passing (Fig. 2 numeral 38

"Scanning module moving along the path as depicted which is perpendicular to the "shorter"

sides of the rectangular white patch).

        Tesavis fails to teach the first predetermined pattern is an isosceles right-angled triangle,

with an apex corresponding to the first side, the apex having the first specific relative position

relation with the first scan position.

        Tsai et al, in the same field of endeavor of determining an accurate scan start position

according to reference marks disposed on a scanner ("...an object of the present invention is to

provide for an image scanner a device for quickly and precisely determining a scan start point

and improving the scanning quality, in which the error resulting from the misreading of the

coordinates of the contamination spots can be avoided..." at column 3 line 25. Tsai), discloses

the first predetermined pattern being an isosceles right-angled triangle (Fig. 4 numerals 422 and

423 "...The color block 422 is designed to have a shape of an isosceles and right-angled

triangle..." at column 6 line 39. "Generally but not necessarily, the background region 424 is of

standard white, and the color blocks 422 and 423 are separately printed within the white

background region 424 with standard black" at column 6 line 36. Tsai), and an apex

corresponding to the first side (Fig. 4 numeral 422, First side being side CD and apex A), the

apex having the first specific relative position relation with the first scan position ("...the CCD

411 further moves a distance L2 from the point A to the scan start point to start a scanning

operation. The distance L2 is predetermined to make the scanning operation start when or

immediately before the CCD 411 reaches the document line 421" at column 7 line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to utilize an isosceles right-angled triangle as disclosed by Tsai as the white patch

reference mark disclosed by Tesavis because "the coordinate of each of the points constituting

the pattern marks...can be calculated under certain known conditions through triangular

functions" (at column 2 line 35, Tsai).

Regarding claim 4, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 3, wherein the isosceles right-angled triangle is solid ("...color blocks

422 and 423 are separately printed within the white background region 424 with standard black"

at column 6 line 36. Tsai), the processor determining the distance between the scanning module

and the first scan position by measuring a length of the first predetermined pattern captured by

the scanning module ("...the CCD 411 further moves a distance L2 from the point A to the scan

start point to start a scanning operation. The distance L2 is predetermined to make the scanning

operation start when or immediately before the CCD 411 reaches the document line 421" at

column 7 line 3, Tsai).

Regarding claim 5, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 3, wherein the isosceles right-angled triangle is hollow, as it does not

contain any other objects within its three sides.

The Tesavis-Tsai combination fails to teach the processor determining the distance

between the scanning module and the first scan position by measuring a distance between two

ending points of the first predetermined pattern captured by the scanning module.

Tsai further discloses the claimed limitations presented above (Fig. 4 numeral 422 with

two ending points being point J and point K at a distance L1+L2 away from the first scan

position "S").

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to utilize the processing method disclosed by Tsai where the distance from the scan

position and the scanning module is calculated according to two ending points of the first

predetermined pattern in the processor of the automatic document feeder disclosed by the

Tesavis-Tsai combination to allow the scanning module to be in a pre-scan position before

proceeding a calculated distance to the "first specified point" and perform a pre-scan operation

which is "used to correct the scanning result so as to obtain a better scanning quality" (at column

7 line 40. Tsai).

Regarding claim 6, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 1, wherein the processor (Fig. 1 numeral 15 "PPC". Tesavis) is capable

of controlling the scanning module to move from a home position to the first scan position

("Initially the PPC will command the platen motor to move the lower camera from home to a

distance in steps equal to the length of the move 38 in the scan direction" at paragraph [29].

Tesavis), and the first predetermined pattern (Fig. 4 numeral 422 of Tsai combined with the ADF

scanner of Tesavis, Fig. 2 numeral 34. Substituting the "white patch" shown in figure 2 numeral

27 with the predetermined pattern disclosed by Tsai in figure 4 numeral 422) is installed on an

area of the bottom surface of the scanner where the scanning module while moving from the

home position to the first scan position can capture the first predetermined pattern ("When the

camera reaches the platen type label with the SSE setup, as previously described, an interrupt is

received by the PPC generated by the FEC 12 it will in turn generate valid page 86 and the

imaging hardware will begin capturing the image" at paragraph [29], Tesavis.)

Regarding claim 9, the Tesavis-Tsai combination discloses an automatic document feeder

scanner having a scanning module capable of positioning on a first scan position accurately, the

automatic document feeder scanner comprising:

a housing (Fig. 2, Tesavis);

an automatic document feeder installed on the housing for conveying a first document

(Fig. 2 numeral 34 "ADF portion" at paragraph [20]. Tesavis), the automatic document feeder

having a bottom surface and a first predetermined pattern installed on the bottom surface ("Fig. 4

numeral 422 of Tsai combined with the ADF scanner of Tesavis, Fig. 2 numeral 34. Substituting

the "white patch" shown in figure 2 numeral 27 with the predetermined pattern and method

disclosed by Tsai in figure 4 numeral 422.);

a first predetermined pattern installed on a bottom surface of the automatic document

feeder, the first predetermined pattern having a first specific relative position relation with the

first scan position ("...the CCD 411 further moves a distance L2 from the point A to the scan

start point to start a scanning operation. The distance L2 is predetermined to make the scanning

operation start when or immediately before the CCD 411 reaches the document line 421" at

column 7 line 3". Tsai);

a scanning module installed in the housing for capturing image data of the first document

(Fig. 2 numerals 26. Tesavis);

a memory installed in the housing for storing a first mapping table, which maps image

data of the first predetermined pattern captured by the scanning module onto a variety of first

length ("The platen type label has features which allows the scanner system to identify the type

and size of the attached platen by capturing an image of it and analyzing characteristics of the

image compared to known values as well as the location and size of the imaging area" at

paragraph [29]. Tesavis) "Known values" would have to be kept in a memory in the imaging

device.; and

a processor installed in the housing for controlling the scanning module and the ADF

(Fig. 1 numeral 15 "PPC"), and for finding out a first length corresponding to the captured image

data in the mapping table according to the captured image data of the first predetermined pattern

captured by the scanning module ("Initially the PPC will command the platen motor to move the

lower camera from home to a distance in steps equal to the length of the move 38 in the scan

direction" at paragraph [29]. Tesavis), and determining the distance between the scanning

module and the first scan position according to the found first length ("Fig. 4 numeral 422 with

two ending points being point J and point K at a distance L1+L2 away from the first scan

position "S". Tsai). *All motivation for combinations made are incorporated by reference from

previous rejections made above.

Regarding claim 10, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 9, wherein the scanning module positioned on the first scan position can

capture the whole first document conveyed over the automatic document feeder ("Once the

document is in the ADF 34 it will be moved at a constant velocity through the upper and lower

CCDs until it ends up in the output tray. The purpose of moving the paper through the CCDs 26

and 29 is to capture a digital version of the image on front and rear side of the document" at

paragraph [21]. Tesavis).

Regarding claim 11, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 9, wherein the processor is capable of controlling the scanning module to

move from a home position to the first scan position ("Initially the PPC will command the platen

motor to move the lower camera from home to a distance in steps equal to the length of the move

38 in the scan direction" at paragraph [29]. Tesavis), and the first predetermined pattern (Fig. 4

numeral 422 of Tsai combined with the ADF scanner of Tesavis, Fig. 2 numeral 34. Substituting

the "white patch" shown in figure 2 numeral 27 with the predetermined pattern disclosed by Tsai

in figure 4 numeral 422) is installed on an area of the bottom surface of the scanner where the

scanning module while moving from the home position to the first scan position can capture the

first predetermined pattern ("When the camera reaches the platen type label with the SSE setup,

as previously described, an interrupt is received by the PPC generated by the FEC 12 it will in

turn generate valid page 86 and the imaging hardware will begin capturing the image" at

paragraph [29], Tesavis.)

Regarding claim 12, the Tesavis-Tsai combination discloses the automatic document

feeder scanner of claim 9 further comprising a transparent document board for a second

document to be placed on (Fig. 3 numeral 41 "Platen section" Tesavis), and a second

predetermined pattern installed on a bottom surface of the transparent document board (Fig. 3

numeral 30 "Platen Type Label" Tesavis), the second predetermined pattern having a second

specific relative position relation with a second scan position ("Initially the PPC will command

the platen motor to move the lower camera from home to a distance in steps equal to the length

of the move 38 in the scan direction...When the camera reaches the platen type label with the

SSE setup, as previously described, an interrupt is received by the PPC generated by the FEC 12

it will in turn generate valid page 86 and the imaging hardware will begin capturing the

image..." at paragraph [29] Tesavis), on which the scanning module can capture the whole

second document ("The platen type label has features which allows the scanner system to

identify the type and size of the attached platen by capturing an image of it and analyzing

characteristics of the image compared to known values as well as the location and size of the

imaging area. The motor controller 19 CPU will eventually recognize a point near the end of the

move 87 and notify the PPC that it is about to decelerate via an interrupt 88" at paragraph [29]

Tesavis), and the processor further comprising a capability to determine a distance between the scanning module and the second scan position by analyzing an image data of the second predetermined pattern captured by the scanning module ("Initially the PPC will command the platen motor to move the lower camera from home to a distance in steps equal to the length of the move 38 in the scan direction at the velocity required for the specified resolution...When the camera reaches the platen type label with the SSE setup, as previously described, an interrupt is received by the PPC generated by the FEC 12" at paragraph [29] Tesavis).

*Regarding claims 1, 6, 9, 11, and 12 it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamares Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jamares Washington
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JW

05/25/07

AUNG S. MOE
SUPERVISORY PATENT EXAMINER

5/29/07